

REPTILIA: SQUAMATA: CORYTOPHANIDAE

CORYTOPHANES PERCARINATUS

Catalogue of American Amphibians and Reptiles.

Townsend, J.H., J.R. McCranie, and L.D. Wilson. 2004. *Corytophanes percarinatus*.

***Corytophanes percarinatus* Duméril**
Keeled Helmeted Basilisk, Turipache de Hojarasca

Corytoph [anes]. *percarinatus* Duméril 1856:518. Type locality, "Ascuintla [= Escuintla], dans l'Amér. centrale, à 30 lieues de Guatemala." See **Remarks**. Holotype, Muséum National d'Histoire Naturelle, Paris (MNHN) 2117, an adult male, collected by M. Morelet, date unknown (not examined by authors).

Corytophanes percarinatus: Troschel 1857:67.

Corytophanes cristata: Salvin 1860:453.

Corytophanes percarinatus: Bocourt 1874:120 in Duméril et al. 1870–1909.

Corytophanes percarinata: Bartlett 1983:3.

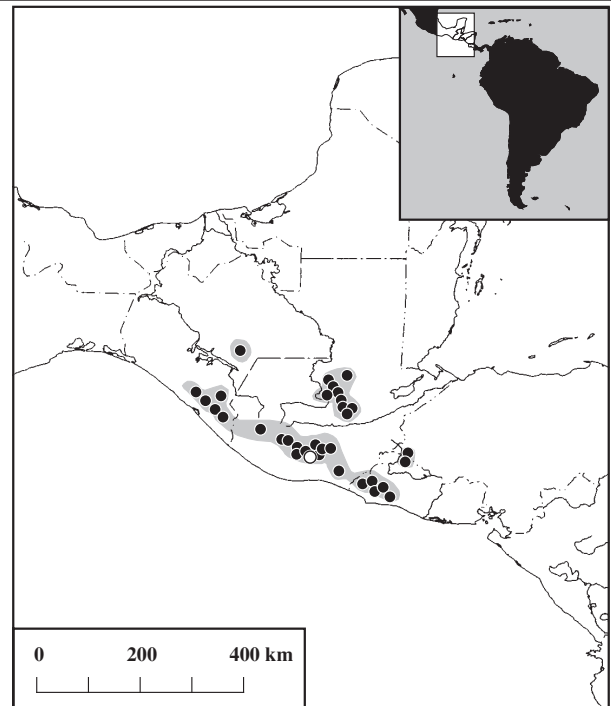
Corytophanes percristatus: Arnold 1994:512 (part?). *Lapsus*.

• **CONTENT.** No subspecies are recognized.

• **DEFINITION.** *Corytophanes percarinatus* is a moderately small corytophanine (maximum snout-vent length of about 110 mm) with a long tail (about 2.5 times longer than SVL), a laterally compressed body, and a triangular-shaped cephalic casque projecting posteriorly past the head. The canthus is raised into a sharp ridge that forms a raised shelf above the eye and continues posteriorly to form a distinct, elevated casque. The ridges forming the posterior edge of the casque unite at the dorsal midline and shortly thereafter curve downward onto the neck. The ridge is continuous with a long, well-developed nuchal crest. Deep frontal and parietal depressions are present. The dorsal head scales are keeled to strongly rugose or striated. A prominent squamosal spine is present above the tympanum. The nasal scale is single, the nostril is located more or less centrally in the scale, and the opening is directed posterolaterally. The gular scales are elongate, strongly keeled, and the medial row is distinctly enlarged and serrated. The gular fold is complete and continuous with the antehumeral fold. The dorsal body scales are large, imbricate, and usually smooth. The lateral body scales are imbricate and usually smooth; most lateral body scales are smaller than the dorsal scales. The middorsal scale row is enlarged, forming a serrated dorsal crest with triangular-shaped scales extending from the shoulder region to the base of the tail. The middorsal crest is more prominent anteriorly and continuous with the well-developed nuchal crest. A serrated row of scales forms an indistinct ventrolateral fold on the body. The ventral scales are large, imbricate, strongly keeled, and usually rounded posteriorly. The subdigital scales are strongly keeled. Caudal autotomy is absent. Femoral and preanal pores are absent.

Dorsal surfaces are some shade of brown. Lateral surfaces of the body are reticulated with yellow or pale green and some shade of brown. A dark brown blotch frequently extends from behind the eye to the anterior portion of the tympanum.

• **DIAGNOSIS.** *Corytophanes percarinatus* is most easily distinguished from *C. hernandesii* by having a well-developed nuchal crest that is continuous with the middorsal crest, and from *C. cristatus* by having keeled to strongly rugose or striated dorsal head scales and a prominent squamosal spine present above the tympanum. *Corytophanes percarinatus* is also the only species in the genus that is viviparous. The species differs from other members of the family Corytophanidae by having a trian-



MAP. Distribution of *Corytophanes percarinatus*. The circle denotes the type locality. Dots indicate other known localities; some symbols denote two or more proximate localities.



FIGURE. Adult male *Corytophanes percarinatus* (USNM 520004) from Guarín, Depto. Ocotepeque, Honduras (photograph by JRM).

gular-shaped head casque projecting posteriorly past the head. The casque is formed by sharply raised ridges extending from the canthal region, above the eye, and continuing posteriorly to form a raised casque. The ridges forming the posterior edge of the casque unite and thereafter curve downward onto the neck to form a continuum with the nuchal and middorsal crests.

• **DESCRIPTIONS.** Duméril (1856) described the holotype. Other comprehensive descriptions are in Duméril et al. (1870–1909), Boulenger (1885), Lang (1989a), and Köhler (1999a,b).

• **ILLUSTRATIONS.** Alvarez del Toro (1982), Álvarez Solórzano and González Escamilla (1987), Köhler (1999a, 2000, 2003), Wilson and McCranie (2004), and Townsend et al. (2004) provided color photographs. Black and white photographs are in Mertens (1952) and Köhler (1999b). Black and white drawings of adults are in Duméril (1856) and Angel (1949). Drawings of the skull are in Duméril et al. (1870–1909) and Lang (1989a). Lang (1989a) also provided drawings of the lower jaw, pelvic girdle, and sclerotic rings, and Olson et al. (1986) pre-

sented a drawing of a left dentary. Lang (1989b) included four SEM micrographs of scales. Köhler (2003) provided a drawing of a lateral view of the head.

• **DISTRIBUTION.** *Corytophanes percarinatus* occurs along the Pacific versant of the Sierra Madre de Chiapas from about the level of Pijijiapan, Chiapas, México (Alvarez del Toro 1982), to western El Salvador and extreme southwestern Honduras near the border with El Salvador. *Corytophanes percarinatus* also occurs on the Atlantic versant in eastern Chiapas, México and in southwestern Alta Verapaz and northern Baja Verapaz in central Guatemala. Many of these populations are disjunct. The species apparently occurs at elevations from about 200 m to about 2200 m, although the vast majority of known localities are above 1000 m (see **Remarks**).

Stuart (1963), McCoy (*in* Peters and Donoso-Barros 1970), Lang (1989a), and Köhler (1999a,b, 2000) gave the northern limits of the range as the Isthmus of Tehuantepec, México. However, we can find no records from any locality farther north than southeastern Chiapas, México. The Ecuadorian locality in Boulenger (1885) and Günther (1885) is in error, and Holman and Birkenholz (1963) erroneously reported the species from a low-elevation locality in extreme northeastern Guatemala.

Campbell and Vannini (1989) apparently erroneously reported this species from the Montañas del Mico, Guatemala, an apparent *lapsus* for the Sierra de las Minas (see Campbell 1983).

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** References are listed by topic: **literature reviews** (Smith and Smith 1976, 1993), **phylogenetic analyses** (Frost and Etheridge 1989, Lang 1989a, Schulte et al. 2003), **osteology** (Etheridge 1965, 1967; Frost and Etheridge 1989; Lang 1989a), **dentition** (Olson et al. 1987), **microanatomy of scales** (Lang 1989b), **parietal eye** (Gundy and Wurst 1976), **cloacal and hemipenial musculature** (Arnold 1984), **dietary analysis** (Sasa and Salvador Monrós 2000), **conservation status** (Wilson and McCranie 2003, 2004), **parasitology** (Asmundsson 2003), and **reproductive cycles and viviparity** (McCoy 1968, whose data were summarized by Fitch 1970, Tinkle et al. 1970, Tinkle and Gibbons 1977, and Shine 1985; Pilorge and Barbault 1981, Köhler 1999a).

Comments on **biogeography** are in Stuart (1950), Campbell (1983), and Johnson (1989, 1990). Guibé (1954) referenced the **holotype** in the MNHN collection. The species is mentioned in **faunal lists**, **notes on distribution**, or **keys**: Salvin (1860, as *Corytophanes cristata*), Duméril et al. (1870–1909), Boulenger (1885), Günther (1885), Cope (1887), Werner (1903), Schmidt (1928), Stuart (1948, 1963), Smith (1949), Smith and Taylor (1950), Mertens (1952), McCoy (*in* Peters and Donoso-Barros 1970), Alvarez del Toro (1983), Campbell (1983, 2001), Campbell and Vannini (1988, 1989), Villa et al. (1988), Flores-Villela (1993), Zug (1993), Flores-Villela et al. (1995), McCranie and Wilson (1998), Köhler (2000, 2003), Dueñas et al. (2001), Wilson and McCranie (2002), and Mertz (2003).

• **REMARKS.** The lower elevational limits for *Corytophanes percarinatus* are poorly understood. Köhler (1999a,b) gave the lowest elevational limits for this species as 700 m, whereas Johnson (1989) and Köhler (2003) accepted 200 m as the lowest elevation. Campbell and Vannini (1989) gave an elevational range of 1300–2200 m for this species in Guatemala, even though its type locality (Escuintla, Guatemala) lies at an elevation of 335 m (Selander and Vaurie 1962). Several other low elevation locality records for *C. percarinatus* are as follows: Lanquín, Alta Verapaz, Guatemala (380 m; specimen in the British Museum and verified as *C. percarinatus* by C.J. McCarthy) and the

Sierra Madre foothills 6 km NE of Escuintla, Chiapas, México (150–400 m; data in litt. from J.D. Johnson). Thus, the species may rarely occur at low-elevation localities, but the vast majority of its locality records are above 1000 m elevation.

• **ETYMOLOGY.** The name *percarinatus* is derived from the Latin *per* (very) and *carinatus* (keeled), and alludes to the keeled or rugose dorsal head scales of this species.

• **COMMENT.** The common names Keeled Helmeted Basilisk and Turipache de Hojarasca follow Liner (1994).

• **ACKNOWLEDGEMENTS.** G. Köhler provided some literature and an English translation of information in Köhler (1999a). C.J. McCarthy provided information on the BMNH specimen from Lanquín, Guatemala, and J.D. Johnson provided information on the Chiapas, México records.

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